

## 22. VERMES.

### 3. Nematodes

by

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With 9 textfigures.

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The Nematodes brought back from German East Africa by Professor SJÖSTEDT form an interesting addition to the meagre records of the Helminth Fauna of Tropical Africa. Small collections have been described from The Sudan by SHIPLEY and by myself; from British West Africa, German West Africa and the Nyassa Sea by v. LINSTOW; and from Uganda by PARONA, but the group has been much neglected by collectors.

The series of monographs on »Die Thierwelt Ost-Afrikas und der Nachbargebiete» published by MÆBIUS in 1898 mentions a solitary Nematode species. The important collecting Expedition recently sent to the region of the »Mountains of the Moon» by the British Museum returned apparently without a single specimen, although it collected no less than 750 different kinds of Vertebrates!

#### *Cylichnostomum pugnicaudatum* n. sp.

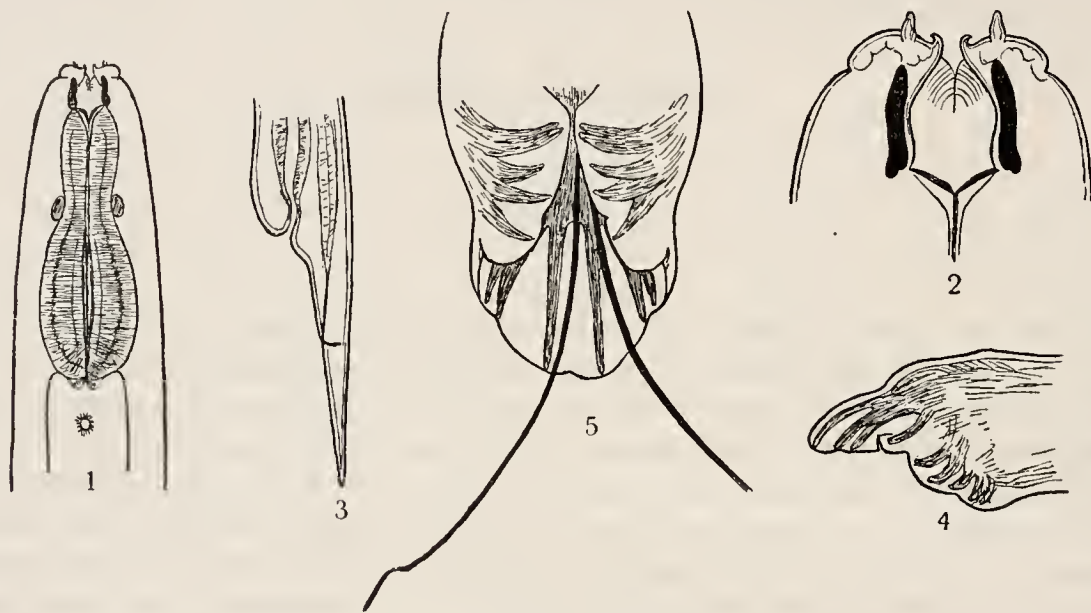
Of *Phacochoerus aliani massaicus* LÖNNB. — *Kilimandjaro*. Fairly stout and rod-like forms tapering in the female to a fine acicular tail. In the male on the other hand the body gradually tapers from the posterior portion forwards.

The average length of the males is 15 mm. of the females 20 mm.

The head is slightly thickened and the mouthcollar separated by a distinct constriction from the rest of the body. The oral aperture is ellipsoidal having its long axis placed dorso-ventrally. It is difficult to enumerate the elements of the corona radiata for in this species only some of the sharply tipped processes appear to reach and protrude from the mouth. The internal crown of the corona radiata cannot be distinguished as a series distinct from the external crown. The cuticular ridges that form the external leaf crown radiate inwards over the vault of the mouth capsule and number no less

than sixty. The submedian papillae are digitate and curve slightly inwards, they end quite simply without knob terminations.

The wall of the mouth capsule is almost uniformly thickened, its cavity when seen from the ventral surface is almost as deep as it is wide. There is no dorsal gutter. The excretory pore is situated very far back as in *C. auriculatum*, just beyond (0,6 mm.) the posterior limit of the oesophagus. The oesophagus is somewhat short (0,53 mm.) and thick. The bursa in all the males is folded inwards ventrally and resembles a closed fist with the three middle fingers semi-extended. The median, posterior, lobe is well developed and has a subsidiary lobe on either side supported by the externo-dorsal ray. The posterior rays number six in all, the two forming the internal pair are separated



Figs. 1—5. *Cylichnostomum pugnicaudatum* n. sp.

Fig. 1. Anterior extremity showing general arrangement of mouth parts oesophagus and excretory pore (camera lucida drawing). — Fig. 2. Mouth capsule under greater magnification. — Fig. 3. Posterior extremity of female showing position of vulva and anus. — Fig. 4. External lateral view of the bursa in the male. — Fig. 5. Bursa seen from ventral aspect, one spicule shown with twisted tip.

by a deep cleft. The two outer rays on either side of the internal pair are fused together for practically half of their course to the border of the lobe. The three median rays of the lateral lobes terminate at an almost equal distance from one another. The two anterior rays remain in close association to their tips.

The two spicules are 1,55 mm. in length; have no hooks at their tips but exhibit in all specimens a curious twist at about 0,15 mm. from their free extremities.

The genital cones are practically undeveloped in this species.

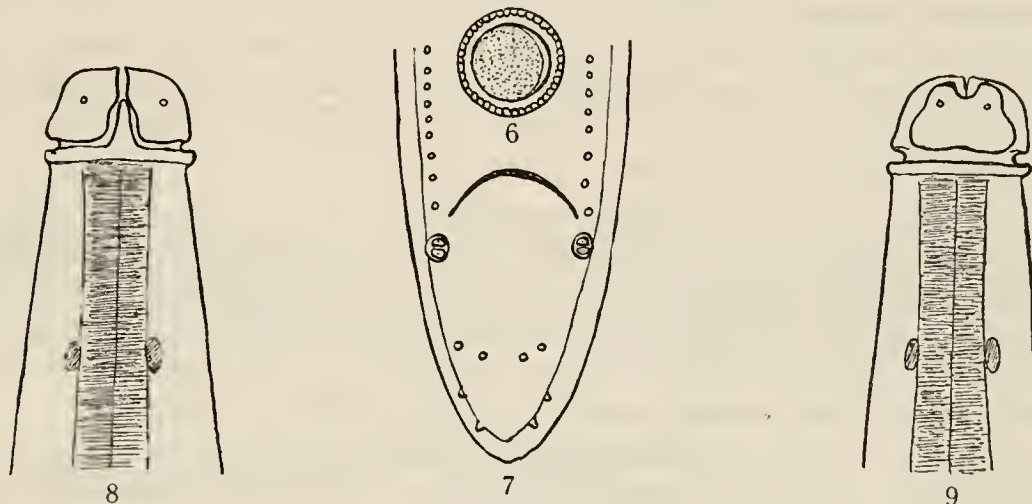
The posterior extremity of the female is much drawn out and the anus (0,8 mm.) and vulva (1,45 mm.) are an unusually long way from the tip of the tail and also from one another (0,65 mm.) The body changes markedly in diameter at the level of the vulva and this region resembles a hand firmly closed upon the thumb with the forefinger fully

extended. The thumb represents the position of the vulvar aperture and the anus opens about half way along the tail as represented by the forefinger. The diameter of the body just anterior to the vulva is 0,5 mm. At the anus it is reduced to 0.15 mm.

**Lagochilascaris major** n. sp.

Of *Felis leo sabakiensis* LÖNNB. — *Kilimandjaro*.

The genus *Lagochilascaris* (mihi) is characterised by the presence of a narrow keel-like projecting ledge of cuticle in the region of the lateral bands along the whole length of the body: the separation of the three lips surrounding the mouth from the rest of the body by a distinct groove and from each other by cuticular intermediate lips that have no. pulp: the bifurcation of the cutting edge of each lip: in the male,



Figs. 6—9. *Lagochilascaris major* n. sp.

Fig. 6. Ovum. — Fig. 7. View of ventral surface of tail in male. — Fig. 8. Anterior extremity of *L. major* showing lips from ventral aspect. — Fig. 9. Anterior extremity showing dorsal lip.

the disposition of the post-anal papillae: in the female the cephalad course of the vagina from the vulva and the mosaic markings of the spheroid ova.

*L. major* apart from the absence of the cephalic alae resembles *Belascaris mystax* in general appearance. The male and female specimens that formed the basis of the following description and measurements were 21,3 mm. and 22.7 mm. in length and 0,5 mm., 0,6 mm. in greatest breadth respectively.

The male is easily distinguished from the female by a slight ventral twist of the posterior end of the body. Save for the terminal tapering of 1 mm. the posterior two thirds are of almost uniform thickness (0,6 mm.) The anterior third gently tapering to 0,2 mm. at the bases of the lips. The oesophagus is a simple muscular bulb very similar to that seen in *Toxascaris marginata*. It measures 1.7 mm. in length 0,25 mm. in greatest breadth. The cloaca opens 0,15 mm. from the tip of the tail. The three portions of the testicular tube are strongly demarcated. The ejaculatory portion shows a distinct bulb when passing into the commencement of the seminal vesicle at 1 mm.

from the tail. The seminal portion occupies half the diameter of the body and extends forwards for a distance of 5,25 mm. The closely packed testicular coils occupy the central portion of the body for a further distance of 10,5 mm. reaching to within 4,5 mm. of the anterior end. The two spicules are of almost equal shape and size, they are of slender build, arcuate and solid measuring 95 mm. long. The preanal papillae are in single row on either side of the body. The exact number of pairs was indeterminate, but exceeds twenty-four. The post-anals comprise a single pair of double papillae immediately behind the anus: four single papillae in almost transverse row (the external pair slightly in advance of the internal) and lastly two single papillae upon each lateral aspect of the conical portion of the tail lying behind the transverse series.

The females are slightly stouter than the males and show no terminal coiling. The oesophagus measures 1,8 mm., the vulva 10 mm. from the anterior end. The ova are spherical and measure 0,06—0,67 mm. in diameter. The surface is marked with deep pitting like the eggs of the genus *Belascaris*. The integument as in the male is finely marked with transverse striae 0,002 mm. apart. *L. major* is a much larger than *L. minor* a form previously recorded by me from a native of Trinidad.

***Filaria cervina* DUJ.**

DUJARDIN: Hist. Nat. d. Helminthes, p. 49. — Of *Tragelaphus sylvaticus meruensis* LÖNNB. — *Meru* lowland. Females only, but the armature of the mouth and the cuticular spines at the tip of the tail permit the specific diagnosis.

*Mermis* sp. (larva) of *Spider*. — The specimen is a larval form and is coiled so inextricably as to render detailed measurement and investigation impossible.

***Ascaris nasuta* SCHNEIDER.**

SCHNEIDER: Monogr. d. Nematoden, p. 45. — Of *Pelicanus roseus* GM. — *Kilimandjaro-Meru*: Natron lakes; numerous specimens.

***Ascaris lumbricoides* LINN.**

M. BRAUN: Die Tierischen Parasiten d. Menschen, p. 299. — Of *Homo*: Wadschagga-boy. — Kibonoto, *Kilimandjaro*.

***Strongylus equinus* (O. F. MÜLLER).**

LOOSS: Egyptian Gov. School of Med. Records Vol. I, p. 76. — Of *Zebra*: *Equus Chapmani Böhmi* (MATSCH.). — *Usambara*.

***Strongylus vulgaris* (LOOSS).**

LOOSS: Egypt. Gov. School of Med. Records Vol. I, p. 76. — Of *Zebra*: *Equus Chapmani Böhmi* (MATSCH.). — *Usambara*.

***Oxyuris curvula* RUD.**

NEUMANN & FLEMING: The Parasite and parasitic Diseases of Domesticated Animals p. 400. — Of *Zebra*: *Equus Chapmani Böhmi* (MATSCH.). — *Kilimandjaro*, lowlands.

***Deletrocephalus stylosus* v. LINSTOW.**

v. LINSTOW: Berlin. Mitt. Zool. Mus. III, 1907, p. 254. — Of *Rhinoceros bicornis* L. *Kilimandjaro*, lowlands.

Although the specimens undoubtedly belong to v. LINSTOW's species the characters of the mouth capsule depart very considerably from those described for *Deletrocephalus dimidiatus* DIESING the type of the genus. It appears highly probable that a detailed comparison of these two forms would result in the transference of *D. stylosus* to a new genus bearing a somewhat similar relationship to *Deletrocephalus* as that exhibited by *Cylichnostomum* to *Triodontophorus*.